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WHOLE No. 3193

NEW YORK, SATURDAY, MAY 17, 1919

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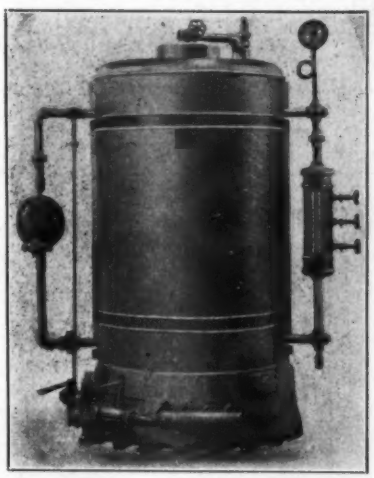

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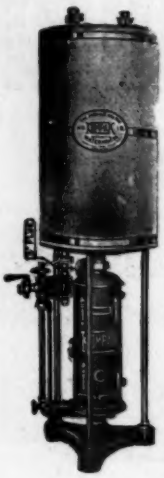

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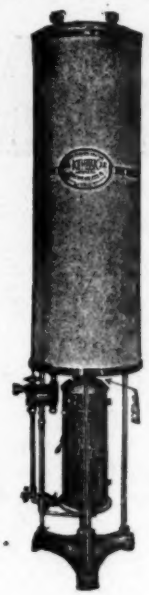

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Making the Gas Plant an Important Economic Factor in the Country Community

Bringing the Industries to the Gas Company that Will Provide a Market for Its By-Products at Home—Wherein a Combination Plant May Be Made Profitable in a Community that Could Not Support a Gas Company Alone

By L. W. ALWYN-SCHMIDT

Research Department, New York Economic Bureau, New York City

Gas and electricity render to-day a very important public service, and they are in this service essentially supplementary.

But while in former years the employment of gas or electricity was largely a matter of convenience for the consumer, conditions have changed during the period through which we have passed quite recently. The chemical industry has found new and important uses for the by-products of the gas industry, and the future development of that industry is not any more a question of the survival of the fittest, but has become a matter of national importance.

Coal, the main raw material of the gas plant, has found many and until lately not quite understood uses. Our large dye industry, our medical drug industry, to quote only a few instances, have to rely upon a large and practically unrestricted supply of the by-products of coal combustion, and there are very few industries which can aid better in the production of these by-products than the gas industry.

We know from recent European experience that during the war everything possible has been done to keep in operation the gas industries in order not to deplete the countries at war of those materials.

Making the by-products of coal necessitates a large and permanent consumption of coal under conditions which allow the manufacture and collection of the by-products. These conditions are not found in the usual methods of coal consumption in the furnace of our apartment houses and in the small kitchen ranges of our farmers. The coal consumed in this kind of work is in fact absolutely lost to the nation after it has done its immediate service of giving heat to a limited number of individuals.

We require more effective means of concentration, which to-day are only found in the large industrial enterprises provided by the metallurgical and the gas industry.

If we wish to make a better use of the by-products, now lost in ordinary everyday firing processes, we shall have to reorganize the whole national heating system on a more economical basis.

We must, to put it plainly, encourage the use of gas for apartment house and ordinary dwelling-house furnaces.

Gas must take the place of coal as a fuel in factories and other enterprises requiring power generated by steam.

A Supply of Raw Material Encourages Its Use

This is no Utopian dream. There is hardly to-day in any big city an apartment house which has not also a gas-pipe connection. There are certainly very few factories which have not also gas conducted to their buildings to be used in an emergency, or where a gas main pipe is not in easy reach.

Why go to all that labor and trouble of carrying coal to each individual householder when this can be done more easily and effectively in the form of gas?

Why heat our factory furnaces and boilers with coal when gas might be employed?

Barges and railroad cars could bring the coal in the desired quantities to the gas works where it would be turned into gas and supplied by pipes without any special effort to the former coal consumer. There would be no cartage to pay, no costly coal cellars and coal pockets would be required.

Thousands of horses and automobiles could be turned to better use, and the great quantities of by-products which now are lost, could be saved and turned into profit by the gas works.

It may be argued that we do not require all these by-products.

But experience has shown that the supply of the raw material encourages its use.

The by-product industry is now only at the beginning of its career.

We have apparently so far only scraped the surface of the productive capacity of coal, and there is no doubt that we are wasting coal all the while in an irresponsible manner.

A raw material is thrown away which might bring untold riches to the world, assist in fertilizing our fields, and add to the merchandable products of our industry.

The problem is one which deserves the fullest study of geologists, economists, engineers and chemists.

The gas plant may one day be the coal product conserver of the world if all those interested in its future will really take up seriously the work in its behalf.

But even if there should not be such a development, there is no indication of the gas industry having outlived its possibilities. There are still thousands and thousands of communities with no gas plant of their own.

There is an enormous field of expansion in the small country community where gas used combined with electricity seems to have an exceptional opportunity. The writer is thinking of a form of public utility which has not been made use of yet to any extent in this country

He likes to picture to himself a small country community having three thousand or less inhabitants, in the centre of a prosperous farming country and bedded in this fertile field a public utility company having a gas generating plant linked with an electrical power station.

Such an enterprise might very well be operated profitably.

It would mean a complete gas plant which would undertake to deliver in the city proper gas for lighting and heating and which would also supply gas to a gas engine, driving a medium-powered dynamo which in turn would produce the electrical current for the electrical lighting plant.

The city in this case would have the choice of both forms of lighting and power, and it would be a mere matter of economy which particular form could best be employed in certain districts or parts of the city.

Gas pipes would have to be laid in all streets so as to supply the gas for the kitchen ranges and if possible also to the heating furnaces. Only the man who has had the comfort of a readily accessible gas stove in his bedroom knows what a luxury he possesses in the possibility of getting a ready supply of heat on a cold morning when the furnace is not yet going.

It would then be left to the householder to decide whether he wants gas or electric lighting installed.

In the outlying districts where gas cannot be transported so easily, electricity would be sold for energy and light, and the gas plant might also take in hand the distribution of coal to consumers who can employ neither gas nor electricity.

There is no doubt that the financial problem of such an arrangement can be worked out.

In communities where such an arrangement cannot be had, the gas plant must make itself a more useful part of the public machine than it often is now. The competitive ability between gas and electricity is a matter of service. The writer is fully conversant with the advantages of each system and completely convinced of the excellent qualities of electrictiy as a public servant.

But the competition between the two industries, where existing, has been taken out of the realm of competitive ability. It has now become a question of retaining the gas industry in the productive scheme of the nation.

While the electrical interests, therefore, cannot be blamed for any inroad they are making in the field of the gas industry, it must be up to the gas interests to secure its future so that the two industries may develop co-ordinately and in a manner best suited to the well being of the nation.

The public will always pick the most convenient service. The gas industry, therefore, must never cease on its present service methods and it must also convince the consumer of the great utility of gas as a public servant.

Improving Methods of Gas Consumption

The first has to be done by making gas ever more practical. The second will be obtained by an expansion of the by-products industry of the gas plant especially in the small gas works which are now as a rule a good deal behind in this respect. Fortunately both ways point also in the direction of new financial prosperity.

Improving the methods of gas consumption means larger business. Improving the by-product industry means cheaper gas, increased earnings and useful enterprise to the locality.

Gas lighting has been allowed to be thought of as old fashioned in this country. Our American gas men would be astonished to see what has been accomplished in this respect in Europe.

There is, to give a few instances only, the gas-lighting fixture as used to-day practically all over the United States. Only a few gas works have made any serious attempt to improve on this important part of gas distribution. As compared with the electric lighting fixtures the gas fixtures commonly seen are ungainly.

The open burner should be done away with completely. It is not only wasting the money of the consumer, but it makes practically impossible the full utilization of the by-products of gas.

It should be replaced by incandescent burners which give a much better light and better service.

Artistic fixtures can be had for these burners and the gas plants should encourage the hardware dealers in their neighborhood to handle the better-class fixtures, even if they should go so far as to offer special inducement to dealers carrying them.

Pneumatic lighting systems operating with a by-pass and allowing the lighting and extinguishing of the gas lamp exactly as in the case of electric light should be generally introduced. They are easily fitted in connection with any gas burner and are a wonderful convenience. They are hardly seen in this country.

Modern gas kitchen ranges should be installed in all houses where the gas plant holds the fitting contract, and a permanent stock of these ranges should be carried in the show rooms.

In England these ranges are given to consumers at

a very low rent or even free of charge, which adds a good deal to their introduction in place of the old-fashioned coal ranges.

Individual gas stoves fitted in the living rooms are a much cheaper way of heating the house than the ordinary furnace because they can be shut off immediately when not wanted. They are more easily regulated and heat a room faster than any other heating system known.

The help of the local dealer must be enlisted in this work, and to make his help effective, it is necessary not only to give the dealer a chance to earn a good profit on the sale of these appliances but also convince the gas industry to retain the field. What applies to the dealer applies to the consumer and to the representative of both, the municipality. A campaign of education, therefore, has to be carried on.

How the Gas Company May Benefit Outside Its Ordinary Business

Let us now see at first in which way the small gas plant can benefit the small community outside its ordinary business of supplying gas to the consumer. I wish to deal here with no special case but rather with the great national aspects of the problem.

The principal value of the gas industry to the nation lies naturally in its conservation of coal and in the support it gives to the by-product industry. For all practical purposes the country gas plant is cut off from the ordinary business of the by-product industry.

The country gas plant is located in a neighborhood which rarely has an industry of its own. The by-products produced in the small gas plant are too limited in quantity as to make worth while their shipment to centres where they might be used. Such a procedure would also not be very practical from the National point of view, as the space consumed for this purpose is better taken for shipping the rural products of the community.

The small gas plant, therefore, must provide its own field of distribution in the immediate neighborhood of the plant, and whatever by-products are made in the plant they will have to be of a character to find a sale in the community.

This shows the way in which this part of the industry will have to be developed in the future. How this can be done is a matter for our engineers to decide. The writer, however, has no doubt that it will be possible to construct by-product installations especially equipped for the purposes of the small gas plant and producing a product which can find a market in a country community.

As already explained, the history of the coal by-product is not written yet to its end. It has only been begun. Therefore, we shall most likely hear soon of new products that may be manufactured easily and without great cost, which may be just the article wanted for our particular case.

The fertilizing energies of coal are well known, and many fertilizers are made already from gas waste.

Certainly it cannot be impossible to develop means to make use even of small quantities of this waste in a commercial manner. What is wanted at the present moment appears nothing else but that our chemists and engineers should be made conversant with this problem so that they may apply themselves to its solution.

There are a great many economic combinations possible which have not been contemplated yet, which, however, deserve the attention of our gas men.

In Belgium, for instance, the glass industry is using tar frequently as a fuel instead of coal with very good results.

The American window-glass industry is still very backward in its development. In normal times we are importing large quantities of foreign glass to make up our own deficiency.

On the other hand the American geologists have shown that the minerals required for glass making are found in many parts of the United States.

The present trouble is that it does not pay to bring the minerals to the centers of consumption or the coal to the minerals.

Many small glass ovens might be erected in country communities. The example may not be a very excellent one, but it will show where the possibilities may lie for the gas plant and where its help may be enlisted in developing the industrial resources of a district.

Similar industrial combinations with the gas industry acting as a basis might readily be found. The whole field of the chemical industry is open for that purpose. The beneficial effect of such a development for a country community can be easily understood. Every additional industrial unit created in the neighborhood adds to its wealth.

As an industrial producer it is not a competitor to the rural production of the district, in fact, the attraction offered by industrial enterprise for labor will rather act to enhance farm property.

If the industrial enterprise developed in this manner is one which sells its products in the neighborhood the community will retain much of its self-created wealth which most certainly is a very desirable result.

To do all this, however, it is necessary that the affairs of the local gas plant should be handled by a man who is not only a gas-plant manager but a personality with an eye for the civic possibilities of his enterprise. Such men can be found. They are especially useful in developing public utilities. The principal fault in all our industrial life so far has been that we have encouraged too much the spectacular enterprise.

We have not realized that the great economic strength of a nation is built upon the greatest number of small enterprises dotting the whole country. This has also acted detrimentally upon the development of the business of the American gas industry. We might take here very well a leaf out of the book of Europe where greater individuality in the treatment of the public utility has also lead to a correspondingly greater development of the community itself.

New Gas Well Brought in in Kentucky

Word has been received of great excitement in the west-central district of Kentucky over the bringing in of a huge gas well in Metcalfe County. Gas experts estimate the well to be capable of producing from 10,000,000 to 20,000,000 cu. ft. of gas daily.

The well is on the farm of Witt Thompson, and the property is being developed by the Consumers' Oil & Gas Company, a Terre Haute, Ind., concern. The well is about midway between Cave City and Glasgow.

British Fuel Research Board Recommends Charging for Gas by Heat Units

Units Charged Would Be Calculated on Volume of Gas Delivered at a Calorific Value Based on the Standard Adopted by the Gas Company Itself

A fuel research board composed of Sir George Beilby, chemical engineer; Sir Charles A. Parsons, inventor of the Parsons steam turbine; Sir Richard Redmayne, chief inspector of mines, and Sir Richard Trelfall, consulting engineer, in a report prepared upon request by the British Board of Trade and other departments has recommended charging for gas on a heat-unit basis in such a manner as to give gas companies a degree of flexibility in process of manufacture and quality standards set.

The board's report is as follows:

Following the lines of the reference to us, we have carefully considered the various interests which may be affected by any change in the present standard. The most direct of these are the interests of the consumers and producers, which coincide at some points, while at others they are divergent.

There are, in addition, other interests of wider and national importance, as, for instance, the conservation of the coal resources of the country and their utilization for the provision of cheap and ample supplies of energy for heating, lighting and power production in centers of population and industry.

The gas industry uses from eighteen to twenty million tons of coal per annum, or approximately one-tenth of the total home consumption. It is, therefore, the most important existing organization for the distribution of potential heat energy, while it shares with the electrical undertakings in the distribution of energy for the production of light and power.

For the consumers it is of the first importance that they should be served with a cheap and ample supply of gas suitable for heating, lighting and power purposes on a basis of cost the fairness of which they can readily understand and accept.

For the producers it is important that they should be as free as possible to develop those methods of production which will yield the largest and most economical output of potential heat energy in the form of gas from the coal they use.

The national interests will best be served by that policy which will promote the widest adoption of scientific methods for the preparation and use of fuel.

The more closely the present system of standards is examined the less satisfactory does it appear from any of the above points of view.

Consumers Not Satisfied

It would be idle to pretend that consumers generally are satisfied with the results of the alterations in standards which had begun to come into operation before the war, and the advent of war conditions tended to aggravate this dissatisfaction.

It is also admitted by those who are informed on the subject that the war conditions placed the producers of gas in a position of the gravest difficulty. The hardships which resulted have, therefore, been shared alike by the producers and the consumers.

These experiences have carried lessons both for consumers and producers which it is hoped will more than compensate in the future for the troubles of the past.

Those who represent the interests of consumers are now in possession of actual experience to the effects on these interests of considerable and uncertain changes in the quality and composition of the gas supply. They are, therefore, in a better position to safeguard these interests more securely for the future. They have, in addition, had forced on their attention, as never before, the need for a more real co-operation between consumers and producers if the best results are to be obtained in the common interest.

The producers are already keenly alive to the lessons of the past four years, and their anxiety to profit by these is quite natural and ought to be encouraged in every legitimate way.

We are hopeful that the producers as well as the consumers will realize the value of the present opportunity for the establishment of a more effective co-operation, and in arriving at the proposals we have to make we have had this ideal always before us.

The need for increased economy in the use of coal has been forced on the notice of the community as a whole by the serious shortage of supplies, while the work of the Coal Controller has shown the need for a co-ordinated system of distribution which will insure that the coals from each center of production will be used as close as possible to these centers.

In the interests of national economy it is most important that the gas undertakings should be in a position to select those coals which can be drawn from the nearest centers of production. A comparison of the prices of gas in the country at large shows the important part which proximity to the centers of coal supply can play in gas production.

Freedom for Development

The needs of the Explosives Department have stimulated the adoption of "stripping" for the production of benzole and other hydrocarbons, and the gas undertakings are now alive to the importance of these hydrocarbons as by-products, the sale of which may help to reduce the cost of the primary gas supply. The future of these by-products will, it is to be hoped, no longer depend on their use for the manufacture of explosives on the scale of the past four years; but their use as motor spirit is likely to extend and to increase, and will provide an outlet for all that is not required by the synthetic chemical industry. It is common knowledge that this industry is based on the hydrocarbons of the benzole group.

The need for a greatly increased output of metal-

lurgical coke, and the consequent development of carbonization in recovery ovens, is likely to bring into prominence the absorption of the resulting gas into the distributing systems of the gas undertakings. Here also the question of the proximity of the centers of production (the coke ovens) is of first importance. No more than a passing reference to this subject can be made in this report, but it has a real significance when the need for elasticity in the fixing of gas standards has to be considered.

We have followed with close attention the views and opinions on gas standards which have found expression in the technical press and elsewhere during the past year. As might have been expected, some of these views are extreme and unpractical, but for the most part the impression is conveyed that the technical leaders in the industry are mainly desirous that they should be given freedom to carry out any or every development in the carbonization and gasification of coal which will lead to economy of production. The prevailing view appears to be that the elasticity in manufacture which they desire can best be secured by the fixing of a sufficiently low calorific standard.

We consider, however, that the fixing of a uniform low standard might be as great a danger to the development of the industry as the fixing of a uniform high standard would be, for the one from certain aspects would be practically as inelastic as the other. We are convinced that the desired elasticity is not to be obtained in this direction, but rather by so safeguarding the interests of the consumer that each gas undertaking may be given freedom of choice as regards raw materials, processes of manufacture and quality of gas, so that it may be in a position to meet the needs of the locality most satisfactorily. For each center of population and industry has its special conditions and environment which ought to be considered; its distance from the sources of coal, the types of coal which are available and the outlets which exist for the principal product and its by-products.

From the Consumers' Standoint

We believe that the interests of the consumers can best be conserved if their contract with the gas undertaking is based on the sale and purchase of heat energy measured in fixed units which can be scientifically determined by simple means. We propose, therefore, that the consumer should be charged for the thermal units which he actually receives, in the same way as the consumer of electricity is charged for the board of trade units which pass through his meter.

The thermal units so charged would be calculated on the volume of gas delivered at a calorific value based on the standard adopted by the gas undertaking itself, thus:

> One thousand cubic feet of gas of 500 B.t.u. standard would be charged as 500,000 thermal units. With a gas of this quality selling at 50d. per 1,000 cu. ft., the equivalent price under the new system would be:
>
> 1d. per 10,000 B.t.u.
> 10d. per 100,000 B.t.u.
> 100d. per 1,000,000 B.t.u.

The gas meter would thus continue to be the measuring instrument as between consumer and producer, and the conversion of cubic feet into thermal units would be easily and accurately made by the use of conversion tables.

The exact relation which the calorific standard to be used in this calculation should bear to the gross calorific value as determined by the gas calorimeter must be carefully considered.

The almost theoretical efficiency of the gas calorimeter is attained because it utilizes heat of all grades from a temperature difference of many hundred degrees to a difference of at most a few degrees above the temperature of the cooling water.

Few, if any, of the gas appliances in ordinary use can be adapted to use the lower grades of heat. The nearest approach to the gas calorimeter in this respect is the flueless, radiating, condensing stove. In this stove the whole of the heat of combustion of the gas is received in the room, and most of it is made available for warming the air, the walls, ceiling, floor, and the other bodies or objects in the room. Unfortunately this high efficiency is gained at the expense of the purity of the air, which becomes contaminated with the products of combustion.

While the total heat supplied in a given volume of gas is easily and accurately determined by the calorimeter, the "availability" of this heat depends on a rather complex set of conditions. In domestic heating and lighting appliances, not only the temperature of the flame, but also its volume and shape influence the "availability" of the heat developed. The theoretical temperature of combustion of a given gas burning in air cannot, therefore, be taken as a measure of the "availability" of the heat developed by the gas in any given type of apparatus. In other words, the "availability," from the consumers' point of view, depends not only on the theoretical potentialities of the gas, but very largely on the use of these potentialities in the particular apparatus in which it is consumed.

Relation of One Heat Unit to Another

The system of charging the thermal units would be simplified by regarding the value of the units of all gases as strictly on a parity; if, for example, the relative values to the consumer of gases of 500 and 400 B.t.u. could be taken as exactly in that ratio. But the experimental proof of this party is still incomplete, and all that can be said at present is that if the consumers' appliances are properly adjusted for the correct use of the grade of gas with which they are supplied, this parity may be tentatively accepted.

The adjustment of the consumers' burners and other appliances for the most efficient use of the gas supplied is, therefore, of fundamental importance if the producer is to be granted the freedom we propose should be given him.

From evidence supplied to us we are satisfied that the effects of the unsatisfactory nature of the gas supply during the war have been greatly aggravated by the fact that the burners and other appliances in which it had to be burned were wholly unsuited for its safe and efficient consumption.

If the method of charging which we suggest is adopted, one of the safeguards to be provided in the interest of the consumers must be the placing on the

produecrs full responsibility for the adjustment of, and, if need be, the replacement of the burners in, consumers' appliances with all reasonable speed when a change of standard is instituted.

It is of paramount importance that suitable machinery shall be devised by which the views of consumers shall be given adequate consideration and their interests protected. In this connection it may be suggested that every supply district above a certain magnitude ought to be provided with one or more gas examiners, and, if necessary, a staff of inspectors whose whole time should be devoted to looking after the interests of gas consumers. The smaller gas supply centers should be grouped into districts for these purposes. Any arrangement of local gas examiners and inspectors no doubt postulates central supervision and co-ordination.

In considering the complaints which have been brought before us by consumers we have endeavored to discriminate, as far as possible, between those due to war conditions and those which may fairly be attributed to the effects of normal working under the existing standards. There can be no doubt that the worst of the experiences complained of were greatly aggravated and brought into notice by war conditions.

The practice of "overexhausting" at the retorts, which is responsible for the almost universal increase of inert gases, became a feasible expedient because of the relaxation of the candle-power standard prior to the war and of the granting of permission during the war to reduce the calorific value to 450 B.t.u. The temptation to use this opportunity to augment the yield of gas at the expense of its quality was no doubt strengthened during the war by the greater demands which had to be met from coal supplies inferior in quality and deficient in quantity.

Dilution

It was to be expected that consumers whose heating and lighting appliances were made and adjusted to burn gas of 500 B.t.u. and over would be quite upset by a drop in standard to 450 B.t.u. or less, more especially as this drop was largely due to the abstraction of benzole and the addition of inert gases.

These war-time experiences emphasize the need for the protection of the consumer from arbitrary changes in the quality and calorific value of the gas supply for which he has not been fully prepared.

With regard to the dilution of coal gas by inert gases, many leading gas engineers have expressed their strong disapproval of the practice, and we are not aware that any engineer of standing would be prepared to defend it seriously. But the fact that it has been largely resorted to as an emergency measure during the war in order that full advantage might be taken of the temporary reduction of the calorific standard to 450 B.t.u. appears to us to be a strong argument against the present method of applying the calorific standard and in favor of the method we propose.

Under the proposed method there will still be a standard to which the gas undertaking must adhere. But a standard set by the gas undertaking itself to suit its own conditions, and which, moreover, can, on due and sufficient notice, be altered from time to time, will be totally different in its effects from a permanent fixed standard adjusted to meet average conditions and stereotyped by legislation.

The natural diluent for coal gas is water gas, made either from coke in a separate producer or in the retorts by steaming the hot coke.

Neither of these methods of dilution involves any serious addition of inert gases to the mixed gas, and from the opinion of experts we are satisfied that the imposition of a maximum limit of 12 per cent of inert gases would in no way curtail the legitimate freedom of choice of raw materials and methods of production by the producers, while it would reassure those consumers who have suffered in the past from the excessive introduction of inert gases. It must be remembered also that the system of charging the consumer only for thermal units actually delivered will remove from the producers the inducement to dilute the gas supply by the addition of inert gases.

Dual Supply for Industrial Uses

As regards the composition of the combustible constituents of the gas, it appears to us that the system of charging which we propose will directly encourage the making of special arrangements between the producers and groups of large consumers for industrial purposes who wish to be supplied with gas of special qualities and composition. For some industrial purposes water gas is an ideal gaseous fuel; for other purposes a gas rich in methane or other hydrocarbons is best. The proposed system of charging will give the producers freedom either to modify the character of the general supply to meet the special industrial needs of the district or to deal with the situation by setting up a dual supply system.

While it is admitted that any general duplication of mains and supply is quite out of the question at present, yet in the type of cases referred to in the previous paragraph, it might be quite feasible to have special pipes delivering a different supply over a short radius from the gas works.

We anticipate that the adoption by the gas undertakings of the system of charging only for thermal units of energy actually delivered to the consumer will greatly stimulate the industrial use of gas, and as any great extension of consumption must inevitably involve an increase in the capacity of the distributing mains and plant, the more general adoption of a dual supply system may not be so far off as many of us have supposed.

The gases available either for blending into one principal supply or for distribution for special purposes cover a fairly wide range of qualities. At the upper end of this range will stand the gas obtained by the carbonization of coal at 500 to 600 deg. Cent. This gas is rich in methane and has a calorific value of over 800 B.t.u. It is peculiarly suitable for compression and transport in cylinders, for use either on railways or on motor vehicles.

Next in order are the gases resulting from carbonization at high temperatures in coke ovens and gas retorts, with calorific values, between 500 and 600 B.t.u.

Blue water gas follows with a calorific value of 300 B.t.u. This is one of the finest and most manageable of fuel gases for industrial purposes, which it would pay, in certain cases, to distribute over a fairly wide area.

Last on the list comes producer gas of 130 to 140 B.t.u. washed for the recovery of ammonia or for the removal of dust and tar. This gas may be the cheapest gaseous source of heat energy to produce, but it is the most expensive to distribute over a wide radius. Owing to its high percentage of inert gases it is obviously quite unsuitable for the dilution of coal gas for general supply purposes. If this gas is produced in gas works for purposes other than heating within the works, its distribution would have to be by means of a special system and over a relatively short radius.

Each of these gases has its own characteristics, and there are probably purposes for which each is specially suited. It therefore appears to us that the continuance of the present system of standardism which tends to the obliteration of these characteristics by a universal process of blending for the production of a gas to conform with a certain artificial standard would be entirely contrary to the spirit of progress.

So long as the technical staff of the gas undertakings are compelled to narrow their outlook and limit the exercise of their imagination by the prime necessity of conforming to a stereotyped standard evolved to suit average conditions and having no direct relation either to the needs or the resources of their own district, so long will they be compelled to lag behind in the industrial race.

The sheet anchor of the gas industry in the future must necessarily be its possession of the cheapest known means of distributing potential heat energy in a convenient form. For lighting and for power production the electric supply of the future may seriously contest the field with the producer of gas, but for the supply of heat gaseous fuel ought to remain supreme if its production and use are developed on sound lines.

Fettering the Development of a Good and Cheap Gas

We have indicated in the argument developed in the foregoing paragraphs that we do not consider that it would be to the ultimate advantage of any of the interests concerned that any one fixed standard of composition and calorific value should be prescribed. The proposal of any such combined standard would lead to much discussion, which would probably result in some form of compromise being accepted which would not realy meet the needs of the situation. Further, the prescription of a standard of composition in addition to the present standard of calorific value would probably fetter the development of a good and cheap gas suply to an even greater extent than the present single standard is said to have done. The arguments already advanced on this point need not be repeated here.

We propose that a new system of charging should be adopted instead of the present system. This may be summarized as follows:

The consumer to be charged for the actual thermal units supplied to him in the gas which passes through his meter.

The thermal units chargeable to be calculated by multiplying the number of cubic feet registered on the meter by the calorific value per cubic foot.

This calorific value to be based on the usual test in the gas calorimeter, subject to any modification which may be accepted in the mutual interest of consumers and producers and sanctioned by the Board of Trade.

Subject to the acceptance by the gas undertaking of the stipulations laid down in the articles, the gas undertaking to be free to deliver to the consumer any mixture of the ordinary combustible gases free from sulphuretted hydrogen, and not containing more than 12 per cent of inert constituents.

The gas undertaking to declare the calorific value of the gas it intends to deliver and to undertake to adjust the consumers' appliances for the ordinary purposes of domestic lighting, heating and cooking so that the gas delivered can be burned in these appliances with safety and efficiency.

Should the gas undertaking desire at any time to change the calorific value of the gas supply, due notice to be given to the consumers or to their representatives. During the period of notice preparations to be made by the gas undertaking for any readjustment of the consumers' appliances which may be required to insure safety and efficiency in the gas at the exit of the consumers' meter.

When more than one quality of gas is distributed to general consumers the foregoing stipulations should apply to all gas supplied.

When gas for industrial use only is supplied in bulk, to be used exclusively in furnaces, muffles, steam boilers, water heaters, gas engines, or in burners of any kind from which the products of combustion are efficiently removed by flues or exhaust fans and discharged into the open air at a height of at least 10 ft. above the level of the adjoining roofs, some relaxation in the foregoing stipulations may be permitted.

With regard to sulphur purification, strong representations have been made to us on the desirability of the complete removal of sulphur compounds from gas. From our own experience in laboratories and workshops as well as in houses, where the bad effects of these and other impurities on apparatus and fittings are always in evidence, we were prepared to receive these representations sympathetically. We therefore strongly urge that the more complete removal not only of the sulphur compounds, but also of the cyanogen compounds, should be kept well in view by all the interests concerned.

Though it is proposed that each gas undertaking shall be free to fix the calorific value which suits it best, the experience of the electrical industry in regard to lamps and voltages has shown that unlimited license in this respect has resulted in the needless multiplication of lamps and fittings for odd voltages which have to be made and stocked.

It seems desirable, therefore, that before any legislation is undertaken the representatives of consumers, producers and the makers of fittings and burners should jointly decide on the standardization of burners in appliances for a limited number of calorific values. It is suggested that four standards may be sufficient: 400, 433, 466 and 500. If these are regarded as minimum figures, the adjustment in each case should admit of an increased aeration to suit gases up to the next higher standard.

A Lamp Window Trim

By ERNEST A. DENCH

The Commercial & Electric Gas Company, Newark, N. J., arranged a classy lamp window display. At the rear were three pedestals placed equally apart and each occupied by an artistic gas lamp of a different design. The three pedestals were connected by a long strip of velvet used for draping purposes, which extended sideways over the red plush material with which the pedestals were covered. The middle pedestal was topped off with a gilt stand containing an attractively gotten up card:

> "An Artistic Lamp of a design and color to harmonize with the furnishings of your Home will bring greater comfort and pleasure in your hours of relaxation."

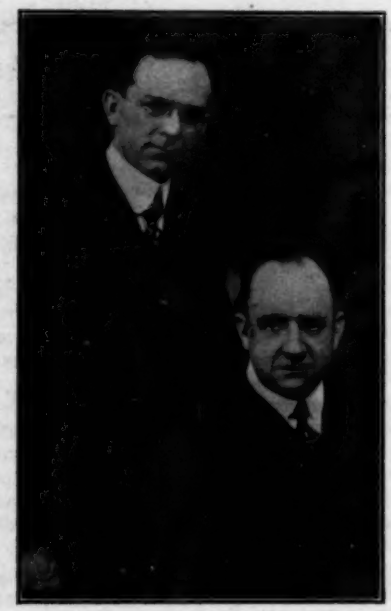
On the floor in front were four lamps of different designs, two at each side. In between another card in a gilt frame—the very essence of refinement—told that:

> "A HANDSOME LAMP for the Home is a Good Investment."

Find Commercial Men More Hopeful Than Any Time Previous During the Last Two Years

G. W. Bean, Southeastern representative for James B. Clow & Sons, of Chicago, was in Philadelphia, Pa., for a period of two months getting "Gasteam" radiators well established there, under the direction of H. T. Carkeek.

Mr. Bean has just reached Tampa, Fla., from a trip over part of his territory and according to him, gas managers seem to be more cheerful over the business outlook than he has seen them for the past two years, and that while there is a labor shortage, as soon as this is overcome the business conditions will be good.



H. T. CARKEEK AND G. W. BEAN

20% Off Translated

During a recent sale of lamps, Trorlich, Duncker, St. Louis, Mo., offered them at twenty per cent off. But he did not bother the housewife who had no head for figures; he simply told her that all she had to do was to deduct a fifth from the present prices.

Learning Salesmanship a Study that Never Ends

Five Qualifications for Outdoor Selling Learned Through Thirty-Four Years of Varied Experience

By FREDERIC G. W. SIGRIST

Salesmanship is a great and wonderful profession. After thirty-four years of practical experience in it, it looks like second to none to me.

The profession has the ring of hard, long and careful study attached to it, and I am sure, it never ends if one desires to be quoted as a "top notcher" therein at all times.

There is always something new to overcome to gain success in the selling lines.

Many go into the profession and get discouraged.

This is because they were never "cut out" to become sales people and stepped out of their scope when they went into it.

They should never have been allowed to get into it if the one responsible knew his business.

Everyone cannot go outside or remain indoors and become a sales person.

It is my contention that the proficient kind of sales people must be born and cannot be artificially moulded into proficiency either through talk or through the book form trying to pump it into anyone who wants to take up salesmanship as a profession whereby to make a living with, and wants to become a "high grader."

DEVELOPING DORMANT QUALITIES

That is impossible unless they have the proper qualifications within them, and then only can one be moulded into proficiency in the sales lines by being shown how to increase the efficiency of these dormant qualifications through talk, illustrations or book forms of salesmanship—

(*Continued on page* 427.)

American Gas Engineering Journal

SIXTIETH YEAR

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As the Journal Views It

Oscar H. Fogg

We are satisfied that the American Gas Association will be all that it should be; that it will represent, in relation to the progress and development of the American gas industry, all that it should represent. The action that has clinched our convictions in this regard is the intelligence of administration demonstrated in the selection of Oscar H. Fogg as secretary-manager.

Colonel Fogg—not long ago merely Mr. Fogg, and still more recently within memory Captain Fogg—has within a comparatively few years attained a considerable degree of prominence in the gas field. The same qualities that gained him this have also made his name well and favorably known in the general field of engineering. His rapid advancement in his last calling, wherein it doesn't matter what you are but entirely what you can do, is convincing that Colonel Fogg's rise to prominence in the gas field is traceable to reasons deeper than mere happening.

In his connection with the Consolidated Gas Company of New York he occupied as delicate a position as he will occupy in the American Gas Association. He was the company's watchdog against unsatisfactory appliances. His testing laboratory was the Mecca of every manufacturer who had a gas-consuming device to sell. If it passed the Consolidated test the sledding toward a market in the gas

field was smooth. If it didn't, the appliance might just as well be consigned to the junk heap. This despite the fact that the Consolidated's tests are exclusively for its own information and its whole influence is thrown against their results being used either for or against the sale of any appliance elsewhere.

Every gas appliance, even though it be the apple of the eye of an experienced and reputable manufacturer, does not come successfully through a test designed to approximate its performance under practical use, and if it didn't the duration of Colonel Fogg's connection with the company is an ample indication that it didn't get his laboratory's O. K.

A good many people must have come away from Colonel Fogg's office disappointed. We have conversed with many of them, and never one did we meet who did not retain the greatest confidence in Colonel Fogg and speak of him in tones of friendship.

Evidently he has the ability to render decisions that are the contrary to those which are desired, yet not sacrifice friendship and good-will in the doing.

It is the ability to do such things as this that, in our opinion, is pre-eminently an essential to the man who will succeed as secretary-manager of the American Gas Association.

Being Born to the Task

An interesting, but by no means new, question is raised by Frederic G. W. Sigrist in his article on the qualifications of salesmen, which is published elsewhere in this issue.

Mr. Sigrist contends a salesman has to be born; he cannot be made. He speaks from the breadth of thirty-four years' experience in selling a wide range of commodities, including gas and electric service.

He has made of his profession a close study, aspiring always to improve his effectiveness as a salesman and conceding always that there remains much that he can still learn.

Nevertheless, we disagree entirely with Mr. Sigrist's contention. We do not believe anyone is born anything particularly. We believe whatever he becomes, assuming that he has been born normal, is entirely a matter of environment and development.

To generally concede otherwise, we feel, would be to kill ambition. Men would be inclined to let nature take care of itself, and as a consequence would rapidly sink back into savagery.

It has been our experience that the son of an eminent engineer, all other things being equal, is more apt to comprehend technical instruction rapidly than will the son of a father equally advanced mentally in more abstract lines.

This is a matter of environment and home influence.

The son of an engineer, even though unconsciously, has been developing as an engineer as he grew up, having his thought accustomed to the channels of thinking those of the engineer must follow.

He is sophisticated, to a degree, as an engineer before knowingly he has taken up his studies, and equally unknowingly has been in the process of being educated as an engineer from the day his mind first started absorbing the talk his ears heard.

As between him and the son of the father in more abstract lines, it is not a matter of aptitude; it is a matter of handicap. And with superior diligence handicaps may be overcome.

We will concede this much to Mr. Sigrist, however: If the man as he developed from childhood developed traits of character that are not consistent to salesmanship, then he has a hard road to travel in competition with the man not similarly handicapped. From the company's standpoint, with an unlimited number of candidates, the effort to develop him might not be advantageous, since the time and expense must of necessity be disproportionate.

But beyond this we will not go. Given the will and the vitality, a man can be pretty much anything he has a mind to be.

If He Is Not a Citizen First, He Can Never Be Much as a Gas Man

We reproduce in our news columns this week a newspaper feature of a kind that particularly appeals to us. Herein a gas man is styled a "Maker of New America," and it is evident from his career, which is outlined, that he has not permitted business to interfere with the discharge of what he considers his duties as a citizen.

In the gas field, it is our belief, the height of business acumen is to cultivate one's sense of responsibility as a citizen, to interest oneself actively in the changing of conditions that detract from social welfare and to put oneself aggressively into movements that promote the contentment and equality of all throughout the community and the nation.

We could point to notable successes in the gas field in confirmation of this view.

It would be difficult to point to a notable success as a gas man, a man whose career has been bounded entirely by selfishness and indifference to how the other fellow fares.

It may be accepted as axiomatic that to become a real gas man one must first be a public-spirited citizen.

Massachusetts Commission May Reduce Rates

At various times during the war the board of Gas and Electric Light Commissioners has allowed 13 gas and electric companies to increase rates "for the duration of the war unless meantime otherwise ordered."

Learning Salesmanship a Study that Never Ends

(*Continued from page* 424.)

education as well as thorough practical contact with the general public.

The following are the qualifications one must be possessed of according to my experience, to become successful:

A sales person must have brains and know how to use them at all times.

Everybody has brains but all can't use them. The salesman's brains must be of the X-ray kind so that when the sales person enters the lair of the prospect, he instantly becomes master of the situation by being able to take in conditions.

The sales person must possess tact and adroitness in words and actions.

A sales person must have nerve to give strength and vigor to the manner of approach. Bashfulness or timidity puts the prospect in command of the situation at once and the sales person is beaten out in the race.

The fourth qualification the sales person must be gifted with is energy. That means the inherent power to keep up and give vigor to that persuasive manner of approach that will get the prospect to see the proposition as the salesman wants him to see it.

The last, but not the least qualification is adaptability, which calls for fitting or adjusting oneself to suit and conform to all things done on the premises of the prospect except where it begins to touch on the merits of the proposition one is trying to sell. Then only cross the prospect's opinion in a firm but polite way and show him his error.

This done, drop the subject as adroitly as can be done and continue on in the pleasant manner you were proceeding before the difference of opinion arose.

I sum the subject up as follows: A sales person must have five qualifications, none of which can be lacking in order to be successful: Working-brains, tact, nerve energy and adaptability.

Getting in Good with the Children

By ERNEST A. DENCH

Children are more susceptible to bribery than anybody else, crooks excepted. We cannot, of course, put children in the same category as crooks, for the good and simple reason that youngsters are totally innocent of any wrongdoing. If it is bribery, it is a commendable and totally inoffensive form of bribery, for it makes the children happy, eases things for their parents and attracts trade to the store.

Aiming for the Bigger Purchase

A merchant in Tupper Lake, N. Y., offered an excellent assortment of cute, happy dolls, with cheerful faces.

The customer spending one dollar in the store during the three weeks set aside for the campaign received one neatly dressed doll, eleven to fourteen inches high. If the purchase amounted to five dollars, the little girl who accompanied her mother was given a medium size, neatly-dressed doll, seventeen inches high. But if the little girl succeeded in inducing her mother to spend ten dollars, she was rewarded with one large size, finely dressed doll, twenty inches high.

A Doll Exposition

Charles Mayer & Company, Indianapolis, Ind., made a certain Friday a red letter day for little girls. On this particular Friday morning every girl in Indianapolis who possessed a doll was invited to bring her doll to the store. There was no distinction between rich girl or poor girl—all had an equal chance—for it was pointed out that it did not matter whether the doll's clothes were torn or faded—or whether the face was chipped or dirty—or whether the doll was big or little—pretty or homely—light or dark, so long as it resembled a doll.

The only rule every little Hoosier girl had to observe was to be sure to pin a piece of paper to the doll with her name and address. On Saturday the dolls were placed in the store window, and the overflow placed on exhibition in a prominent place inside the store. Every girl was invited to see the exhibit. On the following Monday a group picture was taken of the dolls. On Tuesday morning each girl calling at the store for the return of her doll was presented with a copy of the doll window picture

As can be imagined, the stunt got the store talked about in thousands of Indianapolis homes solely by the mouth-to-mouth publicity of the children. It got every girl's good-will, and aside from getting the parents interested in the store, it must be remembered that the stunt will do the store good in years to come—when the little girls are grown up and have little girls of their own.

Flags of Our Allies Contest

Evans, Indianapolis, Ind., recently ran a series of flags of Our Allies in the local newspapers. Half of each advertisement was devoted to a reproduction of a flag and a brief description of it and the other half of the ad was devoted to the store.

In the public schools at the present time most of the history and geography lessons are being devoted to our gallant Allies in the Great War, which has so triumphantly ended. This has resulted in every teacher availing herself of all the means in her power to inform her pupils more about her allies. She pounces upon every opportunity to get home the facts as a cat pounces upon a mouse, so the gas company who helps her out in this connection is sure to receive her hearty co-operation. Children hate to have knowledge crammed into their systems, but it is surprising how much knowledge they will pick up if there is an inducement connected with it. This Evans realized in inviting the school children to cut out the advertisements, which appeared every Tuesday and Saturday. The children were then told to color the flags with crayons or paint and they would soon have a full collection of the flags of our Allies.

This stunt might be improved upon by offering prizes for the best colored flags.

A War-Idol Souvenir

The Live and Let-Live Store, Chattanooga, Tenn., knowing how children worship their war idols, offered a photograph, size fifteen by eighteen inches, of President Wilson or General Pershing with every purchase amounting to two dollars.

It will always pay the gas company to take the child into consideration, for the child will be grown up some day. If a favorable opinion of something or someone is formed while the child is in the impressive age, it will remain long after she is old enough to utilize her own judgment of things.

The Lehigh Coal & Navigation Company has declared a quarterly dividend of 2 per cent, payable May 31.

Peterson Borrows from the Army

Also Determines that No Salesman Must Figure that There Is a Fixed Maximum to His Remuneration—System of Compensation Based Entirely Upon Gas Revenue

By S. G. ADDISON

The few salesmen still left at Blankville had found it so easy to get along during the past two years that they had quite forgotten how to work. Now that it had become necessary to go out and really dig up the business rather than stand on the corner just out of sight of the office and head it off before it got there the sales records were very far from satisfactory.

Peterson, the new commercial manager, did not want to make any more changes than possible. He needed the information that these salesmen had. He needed more salesmen. In fact he simply had to have more salesmen and the right kind were very hard indeed to get.

It seemed both easier and better to attempt to stimulate the present men than to let them out and replace them with new men, men who did not know the policy of the company, the territory or the customers.

Some of the present salesmen had been with the company so long that they knew a great many of the customers. They knew the city thoroughly, they knew the credit of the business men and manufacturers, and if he could only get them to work a little harder they would be able to bring in much more business than could the best new men who could be brought in from the outside.

Making Remuneration Match Production

Peterson had given the matter a great deal of thought. He had gone over the past records of all the men. He had discovered that some had been paid more than they had earned and some had earned more than they had been paid. The only way to get the best results was to make the remuneration of each man match his production.

Readjusting salaries, however, did not seem to promise relief in this direction.

The men who were not earning their present salaries would be discouraged rather than encouraged if their salaries were reduced. Instead of making matters better they would be worse, because no matter how small the salaries were the temperament of these men was such that they would probably still fail to earn them.

On the other extreme there was the same outlook. The men who had been earning more than they were paid would be stimulated to greater effort by the increased salary, would bring in more business, and would still earn more than they were paid, but there would be a question whether they would do the maximum amount of business of which they were capable.

A fixed salary seemed to be holding these men back.

If the lid could be taken off their incomes, if there were no limit to the amount they would be paid, it seemed as though the production of some of these men could be doubled.

The Inevitable Flaw in the Bonus System

Peterson and the Old Man had spent many hours talking over this problem. They had gone over together the past records and the temperament of each man. They had weighed the effect of different changes upon these men. The only way out seemed to be some sort of a bonus system. Bonus systems, however, rarely work out fairly for each man and the company. There is usually a flaw somewhere that sooner or later breaks down the system.

The men were doing different kinds of work and there were still new kinds of work to be done. It was going to be harder to get business than it had been in the past, and the new business secured now was going to be worth more than business had been for the past two years. There didn't seem to be any bonus system that could be worked up that would be fair to all and simple enough so that all could understand, and no bonus system works well unless everyone concerned understands it.

Promotions were then considered, but there seemed to be but one position that could be made and that was assistant commercial manager. Finally Peterson mentioned the trouble he was having in solving the dilemma to a friend who had just been discharged from the army. This man said:

An Army of Generals

"I believe that one reason why the military system in the army works so well is because there are so many chances for promotion. You know there is a corporal for every squad and the corporal may be promoted to sergeant, the sergeant may be promoted to lieutenant and so up to the major general. Each group from which promotions is made is small. You know there are only eight men to a squad and there is a corporal to each squad. Since I have had my army experience I believe that I would use the army system in an applied manner to a business organization. If I were running your department I would put four men in charge of a man who would correspond to a corporal. I would make my squads smaller, because the casualities are not likely to be as high in your business as they were in war. To every four squads I would assign a man corresponding to a sergeant and to every four sergeants I would have a lieutenant. I would give these men added responsibilities and duties and more money. As men developed I would promote them. I would then be able to find the men I needed as assistants without going outside the company, just as the army finds its officer material without going to some other army for it."

Setting a Value on Work

The idea seemed good to Peterson but it did not quite fill the bill. Something more would have to be done than to merely reorganize the department. Even giving prizes for distinguished service would hardly meet the need. Some way must be found to remove the limit from the amount of money each man could earn and this plan must be fair to all. The reorganizing along the line of the military system would no doubt help and help a lot. It would train the men for better positions. It would be a school for executive training and soon he would be able to pick the best qualified man in his department to act as his assistant. To-day he would not be able to pick that man. No matter whom he picked there might be someone else who would make a better executive. The best salesman did not always make the best leader.

(*Continued on page* 436.)

Louisville Company Insures Employees

Free life insurance amounting to $1,000 for each of its 500 employees, or an aggregate of $500,000, was announced recently by officials of the Louisville Gas & Electric Company at a reception and minstrel show given in the offices of the concern for employees and members of their families.

The reception, including dances and refreshments, will be a monthly affair.

Smaller Kemp Automatic Air and Gas Mixing Apparatus to Be Put on Market

The C. M. Kemp Manufacturing Company of Baltimore, Md., are now producing and will have on the market within one month small size Kemp System automatic air and gas-mixing apparatus of the slide valve type, which will have a capacity of 1,500 cu. ft. per hour and 1,000 cu. ft. per hour.

This apparatus has been devised to meet a demand. The apparatus is compact and shipped ready to set up, so that the purchaser has but a few pipe connections to make in order to put the machine into operation. The installation is greatly simplified.

Newly Elected President of Wisconsin Gas Association Resigns

Raymond H. Smith, of Sheboygan, Wis., has resigned his position with the Eastern Wisconsin Electric Company to become connected with the Electric Bond & Share Company as vice-president of their Panama properties, with headquarters at New York, and at the same time tendered his resignation of the presidency and executive committee of the Wisconsin Gas Association, effective May 15.

Under the circumstances, Bruno Rahn, of Milwaukee, vice-president of the association, will assume the duties of the president from and after the date of Mr. Smith's resignation, namely May 15.

Boston Consolidated Gas Output

Boston Consolidated Gas Company output in April was 489,602,000 cu. ft., a decrease of 1.4 per cent from corresponding month of 1918.

New York Public Service Commission Abolished

Two Independent Commissions Established

With the signing of the Foley Bill by Governor Smith of New York State May 3 the Public Service Commission (of the First District), which has been carrying on both regulation of utilities and construction of rapid-transit lines in New York City for ten years, was abolished, and a single utility-regulation commission was established to take up its regulative work. Under another legislative bill, not yet signed, construction of rapid-transit lines is to be handled by a separate organization under a rapid-transit construction commissioner.

Immediately following his signing of the new public-service law, Governor Smith appointed Lewis Nixon, state superintendent of public works, as regulation commissioner for the city. Mr. Nixon, graduated from Annapolis in 1882, was a naval constructor for many years, and then established a shipyard at Elizabethport, N. J. Later he was chairman of the new East River Bridge Commission which built the Williamsburg bridge, and subsequently became Commissioner of Public Works and acting Borough President of Richmond (Staten Island), New York City. He was appointed Superintendent of Public Works for the State of New York in January. His deputy, Edward F. Walsh, succeeds to this position.

National Gas Water Heater Week June 9-14

The second "hop" on the flying trip to renewed sales activities for gas companies, with an "ocean" of gas-heated water to measure the record.

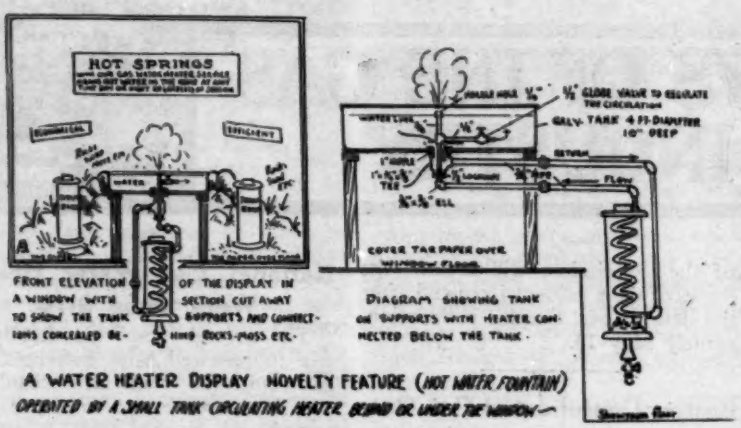
Every representative of the gas industry has long since been convinced that the gas water heater is a means for increasing his output of gas, a most desirable means and an unlimited prospect field in which to work.

In the first place gas water heating reduces its peak consumption at a time of the year when it is most welcome. In the second place, intensive efforts devoted to the sale of gas water heaters will show a high percentage of results and the development of a most profitable field. Gas water heaters almost always represent new installations—not replacements—and their use, though begun on a small economical scale, is bound to expand as the consumer becomes educated "to the real convenience of hot water always on tap," and the real necessity of hot water in home, shop, hospital, church, kitchen and clubroom.

The appeal to the public may be made in any number of ways, and every gas water heater manufacturer is prepared to furnish sales arguments to further the introduction of his line.

The one appeal, however, to present to the public this year, as the cardinal reason for installing a gas water heater, is the sanitary appeal. The two ideas of cleanliness and hot water have become almost inseparable in our minds, and conditions and events of the past winter and of the past two or three years have emphasized the supreme value of absolute cleanliness in town, home and institution. Why not make use of the fact in selling gas water heaters, the most convenient and surest and most economical means of securing a pan full or a tub full of hot water?

The Surgeon General of the U. S.


HOT SPRINGS
FRONT ELEVATION OF THE DISPLAY IN A WINDOW WITH SECTION CUT AWAY TO SHOW THE TANK SUPPORTS AND CONNECTIONS CONCEALED BE-HIND BOOKS-MOSS ETC.
DIAGRAM SHOWING TANK ON SUPPORTS WITH HEATER CONNECTED BELOW THE TANK.

A WATER HEATER DISPLAY NOVELTY FEATURE (HOT WATER FOUNTAIN) OPERATED BY A SMALL TANK CIRCULATING HEATER BEHIND OR UNDER THE WINDOW

Public Health Service has recently sent out to all mayors, health officers and citizens interested in the health of their communities an open letter labeled "Is Your Community Fit?" Its slogan is "Public health is purchasable." Urge your community to do its part in the great health campaign by using every means to maintain absolute cleanliness on all sides, and make the connection between this state and the equipment of homes with really adequate supplies of hot water. What community supplied with running water would return to the days of wells and pumps? And yet a supply of running *hot* water is as essential—especially in crowded town quarters—for health, comfort and convenience. National Gas Water Heater Week is the time to begin an aggressive campaign for the sale of gas water heaters.

National Gas Water Heater Week has met with marked success in the past by those companies that have celebrated it with special sales. Many plans have been tried and have proved remunerative; and frequently the more simple and striking a plan, the more satisfactory has been its results. One of the most important requisites of any campaign, however, is an organization in hearty accord with all details of the sale. The co-operation of all departments of the entire company is decidedly necessary.

Upon such occasions as National Gas Water Heater Week, extra advertising, simple but attractive, should be distributed through newspapers, gas bills, wagon posters, wrappers around merchandise, outgoing mail and pamphlets telling of the convenience and desirability of having an adequate supply of hot water at one's command.

There should be attractive window and floor displays. The accompanying sketch shows a mechanical device that is bound to attract attention, and the American Gas Association Window Display Service for May includes two excellent window trims for the campaign. Special inducements should be offered to encourage the prospect; liberal prices, special discounts, easy terms for payment no money down at the time the order is taken, free connections, special concessions to those who order their coal ranges removed or who accept a combination offer in which a gas range and a gas water heater are installed at the same time.

Participation in National Gas Range Week affords the salesmen an excellent opportunity in which to secure a large list of prospects for water heater sales, and the sales force should be well primed for the additional opportunity offered by National Gas Water Heater Week. They should be thoroughly instructed to meet any situation that a prospect may suggest. Any sales plan that is decided upon should include ways and means for paying the sales representatives particularly well. These men must have an incentive if they are to produce telling results.

Employees of other departments of the company should be given special training and be held in readiness if required on the sales floor to wait on customers during rush hours. Prompt and courteous attention to prospective customers is essential. They should not be permitted to wait and thus lose the interest and enthusiasm which it has taken weeks of publicity and advertising to arouse.

Be prepared to render good and efficient service in having the water heaters installed promptly. Should one find that one is unable to cope with the situation, then sell the heaters with a definite understanding as to when the work will be completed.

The suggestions published in the National Commercial Gas Association's Bulletin of June, 1917, will be of great assistance to sales managers who have not used the entire layout in previous water heater campaigns. Those who have used the suggestions, we believe, have had sufficient experience to compile such plans as will best suit their local conditions. We all have our hobbies as to how a campaign should be planned and conducted. Formulate your plans, work out the details, and put them in successful operation. Then send your story to the editor of the association monthly. And above all, let your water-heater campaign be the start of a continued drive.

National Gas Water-Heater Week

June 9-14, 1919

Description of Mechanical Display for Gas Water-Heater Week

Description: A large galvanized tank elevated on wood framework near center of window has a hole made in the bottom with a 1 in. nipple inserted and made watertight by soldering to bottom of tank or with locknuts and washers. A 1 in. x ¾ side outlet by ⅜ in. lower outlet tee is screwed to this nipple—a ⅜ in. pipe with a long thread at lower end and a nozzle with a somewhat smaller opening in it at the upper end is screwed through the ⅜ in. end of the tee sufficiently to allow for a locknut and an elbow thread. The nozzle should extend to ½ in. above the desired water level in the tank. A tee and a valve should be inserted below the water level of the tank to relieve the pressure and regulate the fountain action.

The return to the water heater is connected through the side tee and the flow is connected at the bottom of this same tee. If carefully piped this should give a strong spouting action at the nozzle.

The Ohio Cities Gas Company has purchased the Moore Oil Company of Cincinnati, which has been doing a gross business of $5,000,000 yearly.

Exhibits of Gas Section at Industrial Show of Brooklyn Engineers' Club

Water Heater Demonstrated by Brockton Company

The Brockton Gas Light Company started a campaign for Ruud water heaters which lasted a week. A very attractive window display drew the attention of passersby. A High school boy was dressed as a clown in the window, with a card reading: "Don't do it in the clown way," showing the heating of water by slow method in a kettle.

The window was fitted up as a bathroom, with a Ruud heater in the center. A faucet had been attached to the outside of the building with the instructions, "turn the faucet and the hot water runs hot." Salesmen from Boston were there for the week, demonstrating and selling the heaters.

Webster City Considering Municipal Ownership of Gas Plant

The Webster City Chamber of Commerce has started a move toward municipal ownership of the gas plant. A committee of which President W. F. Cole is chairman called on the council recently and asked their permission to circulate a petition among the citizens asking that the city take over the plant and operate it. If this is done, Webster City will own all her public utilities.

Committees of Illinois Gas Association to Have An Active Year's Work

The membership list in the various committees of the Illinois Gas Association has been completed and arrangements have been made to refer to the chairmen of these various questions that will arise, the purpose being to have full report ready for submission at the next meeting of the Association. It is expected that each committee will find itself confronted with plenty of work. The great expansion of industrial gas and the lively impulse under way to recover and market numerous possible by-products of gas, will necessarily create many problems. The investigations of these committees and the independent inquiries that will be carried on by individuals and companies it is thought will result in the accumulation of a great fund of valuable information. The officers of the Illinois Gas Association hope that much of this will be laid before the members at the annual meeting next March. It will be held in Chicago as usual. A large manufacturers' exhibit will be one of its features.

The success of the meeting last March and the new fields for gas has stimulated the membership in the Association which has passed the five hundred mark and is still growing. The latter fact has also greatly increased interest in the Gas Engineering Course offered by the University of Illinois. There are two scholarships in this course which are beneficiaries of the financial assistance offered. The University has received many applications for them.

THE COLLIER OIL & GAS COMPANY, Wilmington. To acquire oil and gas lands and develop same; capital, $500,000.

Business Men Should See that Soldiers Are Given Employment

Business men of the country, as represented in commercial organizations, must assume the burden of seeing that discharged soldiers and sailors are given employment, Robert H. Manley, commissioner of Omaha, Neb., Chamber of Commerce told a meeting of the National Association of Commercial Organization Secretaries, meeting in St. Louis in connection with the seventh annual meeting of the Chamber of Commerce of the United States.

The responsibilities of chambers of commerce has increased, Mr. Manley said, by reason of the fact that Congress failed to provide appropriation for the United States Employment Service.

"More than four million young men left their positions in civil life," said Mr. Manley, "and went to the front or into training camps for the world war. When these men left their homes they confidently expected to secure their former positions or better jobs on their return.

"The fighting ended suddenly. Provision for re-entry of fighting men into civil life was in the preliminary state of organization. There was no comprehensive program. To organize adequately the complete machinery for re-establishment of soldiers and sailors in civil life was under the circumstances a task too great for any governmental agency, no matter how well conducted. As it happened no fair test of the ability of the U. S. Department of Employment to meet the major demands of the national problem was possible. Congress adjourned without appropriating the money to keep that machinery in operation.

"To-day, we may say that the first and, we hope, the worst phase of the returning soldier problem has passed. Most of the soldiers stationed in near-by camps have returned to their homes. There have been few alarming demonstrations as a result of unemployment of soldiers. Men are returning in smaller groups. Spring work is opening. Such machinery as has been created is functioning more easily to practice.

"Let us say we are entering the second stage of the soldier unemployment problem. To my mind the responsibility of chambers of commerce to the soldiers and to the community has increased. For this reason: In the first stage of the soldier employment problem the Department of Labor had amply financed bureaus of employment already established in communities of any size. At such a time the business men could quite properly assume that the major burden could be borne by these bureaus. To-day this agency finds its financial support withdrawn. Some other agency must step in, if not to supplant at least to assist. This is obvious.

"Again war work organizations were organized for war rather than for readjustment. They are to-day operating, as one might say, on a falling market. Chambers of commerce are firmly entrenched organizations to which the public will look more confidently for readjustment as the nation advances further from the stress of war. An increased responsibility is here.

"To-day we find that barely one-half of the nation's soldiers have returned to their homes and scarcely one-fourth of the sailors have been discharged. Those who have returned to civil life are most of them re-established. The overseas sol-soldiers now returning will probably be more difficult to place for the reason that they have for the most part been away from their old jobs longer than were the men who were in cantonments when the armistice was signed. The overseas men will naturally be in less perfect touch with civil life by reason of their longer absence. Probably somewhat fewer of them will find their old jobs available. They will be returning when their replacement will be more on a stern business basis than formerly. War spirit dies as war fades into the past. If business methods are to obtain more and more in filling jobs, business organization should be established to look after the replacement of soldiers. The task is not yet half done. Chambers of commerce everywhere recognize their responsibility and are ready and willing to do what is possible and practicable for them to do. Let us see what is possible and practicable.

"There is a big difference between merely 'doing things' and 'getting things done.' An efficient chamber is intent on getting things done. Every thinking secretary will agree that the re-employment of soldiers is a thing that must be done and done well in every community. If we cannot do it ourselves, we can at least see that it is done. Of all problems of adjustment none is more urgent. We know that business conditions are unsettled. We know that there are sound economic reasons why scores of industries in scores of communities cannot immediately develop a program of business forward. An analysis of the situation proves this. But please remember the returned soldier is not asking for an analysis of the situation. He does not want to know why it isn't convenient to add to pay rolls. What he wants is a job. No community should want to run the risk of telling boys to wait for jobs when they can't wait.

"May I speak from a rather close personal touch with several hundred of returned soldiers in the last five months in the city in which I live and say that it is my confident belief that in the mind of the returning soldier to-day the business man is on trial. There appears to be a disposition among a large number of boys seeking reinstatement in civil life to divide people into two classes—those who went to war and those who stayed at home. He feels without any noticeable bitterness at present, that the business men, those who stayed at home, are the beneficiaries in this war. I think he feels that the business men can give him a job or withhold it. And right here I want to urge the chamber of commerce not to complacently turn over to others, no matter whom, the exclusive responsibility of finding jobs for these men, unless you feel sure this work will be done. I am not darkly hinting at any menace of Bolshevism. Indications are that no organized soldier movement will take such a radical course, but there is a plain opportunity here to win either the friendship or the distrust of these returning men. Winning this war in the field was a big job that was up to these soldiers and they did it. They earned our lasting regard. Placing these boys back in civil life is another big job. This is not up to the soldiers, but up to us. If you don't do this thing yourselves, at least see that you get this thing done."

THE MASSACHUSETTS GAS COMPANY has declared a semi-annual dividend of 2 per cent on preferred, payable June 2.

Gas Well Rig Burns with Loss of $15,000

Fire of unknown origin destroyed the drilling rig of the Wyoming-Yellowstone Company, eighteen miles from Kirby, Wyo., doing a damage estimated at $15,000. When a depth of 2,150 ft. was reached a flow of wet gas, estimated at 10,000,000 ft. a day, was encountered. Drilling was carried on with great care, but the gas caught fire from some source, and completely destroyed the rig. Last reports say that the flame from the burning gas well is shooting fifty feet in the air.

Many Manufacturers Take Advantage of Publicity Gained Through Gas Range Campaign

Practically an entire section of the Sunday, May 4, issue of the San Francisco *Chronicle* was devoted to featuring gas ranges for Gas-Range Week Campaign in California.

A kitchen in a Benvenue Avenue bungalow in Berkeley was shown, where the use of the gas range permits a pretty room in which a cozy breakfast nook is not at all out of place. Another illustration was an apartment house kitchen, showing an even greater compactness made possible by the use of the gas range.

A kitchen of one of the prominent residents of San Francisco was also shown, which was a notable example of the compact kitchen where no more space is used than necessary and consequently many steps saved. The cool gas range makes such a kitchen possible.

An installation of "Garland" hotel gas ranges in the Palace Hotel was shown. The total range pictured was 42½ ft. long.

Among the manufacturers and distributers who took advantage of this broadcast publicity were:

Nathan-Dohrmann Company, who handle the "Detroit Jewel"; Bare Brothers, distributers of the "Eriez" Range; Charles Brown & Sons, featuring the Reliable "Angliron"; Mangrum & Otter, Inc., distributers of "Garland" Gas Ranges; Bunster & Saxe, featuring the "Craftsman" Range, also the "Hoffman" Water Heater; M. Friedman & Company, advertising the "Packard" Gas Range; Eclipse Gas Stove Company, manufacturers of the "Eclipse," devoted space to listing their agents in the northern California district carrying their product; James Graham Manufacturing Company, manufacturers of the "Wedgewood."

Various other San Francisco papers, and the daily papers throughout the State, have been making a big feature of Gas Range Week, notably the *San Francisco Bulletin*, *San Francisco Examiner* and the *Oakland Enquirer*; the *Los Angeles Evening Herald* had a special section for the entire week devoted to gas range publicity which they called the "Gas Range Special Section."

Training School for Cadets Opened at Bartlesville

Stringent war-time conditions having been relieved, making it possible to secure more men readily, the cadet course for future Doherty executives has again been opened, this time, under the name of Junior Engineers, and the work of training these men, seven of whom are under the supervision of the Bartlesville, Okla., office, has been commenced by T. J. Steeper, who is in charge of the local contingent.

The plan is to select men who are graduates of the various technical schools and colleges of the country, give them two years of training in the various departments of the company in order that they may be familiar with all phases of the work, and then place them in responsible positions which are opening nearly every day in the Doherty organization. The men selected for the course must have been graduated from their schools with high scholarship.

Personality plays a most important part in the selection of the men for the cadet course, for in many instances, the student winds up by filling a position with some public utility where he daily comes in contact with people who will not tolerate a man with a grouchy disposition. Ability to grasp ideas is another point by which the men making the selections are guided.

Although there are but seven men enrolled for the course in Bartlesville at the present time, it is planned to have the class increased to 100 before June 1

Formerly students were known as "the Doherty Cadets" rather than the "Junior Engineers." Many of the schools were being conducted at various locations covered by the Doherty organization, but war-time conditions which demanded every available man in military service necessitated the temporary disbanding of the forces.

This Is Gas Range Demonstration Week

May 5th to 10th Inclusive

GAS RANGES are being exploited particularly during this period which has been set aside all over the country as GAS RANGE WEEK.

All makes of gas ranges will be shown by the dealers, many of them having special window displays and demonstrations. Visitors are welcome to visit the various displays and inspect the latest improvements in gas ranges *whether they wish to buy or not.* The sales force is on hand for the purpose of taking them through the line and pointing out the merits of each range.

The main features in which GAS is superior to either wood or coal for cooking are *convenience, cleanliness, expedition* and *economy.* The gas ranges of today are a great improvement upon those of past years. Whatever difficulties or disappointments cooks may have had in the past have been entirely eliminated.

We urge you to take advantage of the invitation extended to the public by the dealers to come in and inspect the newest types of gas ranges. They have every kind designed to meet your kitchen requirements.

Pacific Gas & Electric Company

445 Sutter Street San Francisco

AN ADVERTISEMENT APPEARING IN CALIFORNIA DAILY PAPERS WHICH AROUSED INTEREST IN THE GAS RANGE CAMPAIGN

Peoples Company May Apply for a Higher Rate

That the Peoples Gas Light & Coke Company of Chicago is considering making application to the public utilities commission for an advance in rate over the present 88 cent rate allowed by the commission's war-time ruling, was a development of the week's hearings. Timothy Mullen, of counsel for the company, stated before the commission that the company is intending to apply for an increase over the present emergency rate.

Attorney Mullen's announcement followed a motion by Donald Richberg, special gas counsel for the city, that the emergency rate be discontinued June 1, if by that time the company had not shown just cause why it should be allowed the present emergency rate. He stated that his purpose in making the motion was to expedite the hearing, which he feared would drag on until Aug. 1, the date at which the temporary rate automatically expires, unless renewed by action of the commission.

Attorney Mullen, in stating the plan of the company, said that it is not ready to name the rate considered fair as yet, but declared that it had debated whether to ask that the emergency rate be continued, or that a still higher rate be asked, "in order that the company might perform its function to the public."

The intervention of the commission in the affairs of the company cost it $16,000 in rebates during April, according to a statement given out by Chief Engineer A. S. B. Little of the commission. Of the 900 complaints met with rebates by the company, 286 were made to the commission direct, and refunds totaling $1,181 allowed on them. The commission is now handling 400 complaints daily, said Mr. Little.

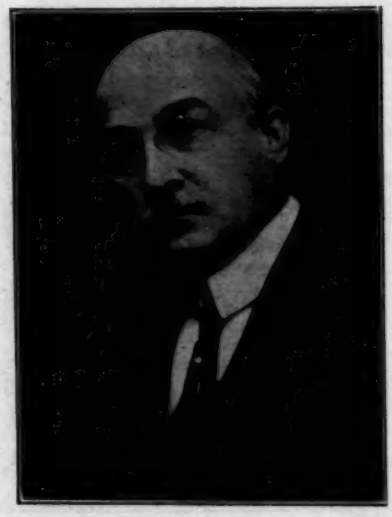
Citizens Company Authorized to Sell Stocks and Bonds

The public service commission recently authorized the Citizens Gas Company of Indianapolis, Ind., to sell 500,000 of its authorized capital stock at not less than par and to issue $351,000 of first and refunding 5 per cent mortgage bonds to sell at not less than 85 per cent of par.

The money to be derived from the sale of stocks and bonds is to provide more working capital for the company and to reimburse the company for improvements and extensions made to its system.

John Gribbel Listed Among "Makers of New America"

A daily newspaper of more than local repute, the *Philadelphia North American*, has undertaken to list; and, by an outline of their careers, justify its listings, men who may be considered "Makers of New America." A gas man, John Gribbel, is featured in the Apr. 21 listing. Of Mr. Gribbel the *North American* has this to say:



JOHN GRIBBEL

"One man who combines business acumen, public spirit, learning and esthetic tastes, and who has achieved in all is John Gribbel. As a man of affairs he has had long and wide experience, accompanied with marked success. One thing after another attracted his attention and his participation. He gives his mind to whatever he goes into, working on the theory that a capital investment requires not only to be made but to be carried through; and that this means courageous planning and wise, farsighted management and administration.

"So it is that while Mr. Gribbel has gone into many projects he does not join in more than he can give directing thought to. Those who work with him have highest regard for his advice and counsel, and even larger admiration for his clear and direct mental processes. A wide variety of enterprises have enlisted him. Among them is that of American citizenship and a deep sense of its responsibilities and duties. It was that which caused him to break entirely with the editorial policy of the *Public Ledger* in September, 1914, and to resign as vice-president, leaving the management to C. H. K. Curtis.

"Many years earlier, Mr. Gribbel, at the suggestion of Morris Newburger, made a capital investment in the Curtis Publishing Company, and so had a close business and personal association with Mr. Curtis for a long time before they jointly bought the *Public Ledger* at the end of 1912. The two have fine country seats, closely adjoining, near Wyncote.

"John Gribbel was born March 29, 1858, in Jersey City, and after coming from school worked first as a clerk in two New York banks. He has been a Philadelphian since 1883, when he moved here to go with Harris Griffin & Company, manufacturers of gas meters. When, in 1890, that firm took the present name of J. J. Griffin & Company, Mr. Gribbel became junior partner, and two years later the sole owner of the business, which has been largely successful and very profitable. Outside of this he has gone into various gas, electric and street railway utilities, operating in several parts of the country.

"Mr. Gribbel is vice-president of the Brooklyn Borough Gas Company, and a director in the Girard National Bank, Real Estate Trust Company, Pennsylvania Sugar Company, the Wesleyan University and of the National Properties Company, which controls among other projects the Wilmington and Chester Railways and the American Railways system. Until it was absorbed into a larger financial institution he was president of the Fairmount Savings Trust Company.

"An independent Republican, Mr. Gribbel was elected in December, 1914, president of the Union League. He is a member of several other clubs, but outside of business his interest is greatest in the study and collection of American colonial historical documents and of seventeenth century English and French engravings, books and information. In 1913 Mr. Gribbel bought the Glenriddell manuscripts of Burns, which the Athenaeum library of Liverpool had sold, and returned them as a gift to Scotland, where they are to be held alternately five years by Edinburgh and Glasgow."

Oscar H. Fogg Appointed Secretary-Manager of the American Gas Association

Upon the recommendation of a special committee consisting of H. C. Abell, chairman, J. B. Klumpp, C. A. Munroe, A. B. Tenney and F. W. Frueauff, the Executive Board has unanimously elected Lt. Colonel Oscar H. Fogg, recently of the Ordnance Department, United States Army, to the position of secretary-manager of the American Gas Association.

George B. Cortelyou, president of the association, announces that Colonel Fogg has accepted this appointment, and has entered upon his new duties.

Both the special committee and the executive board have assumed as a serious responsibility their authority to recommend and elect a secretary-manager. It has been their intention since the inauguration of the association, to select for this important office a man equipped with a thorough knowledge of all aspects of the industry which the association represents, and it is with the satisfaction of a duty fully performed that their choice is presented to the gas industry as a whole.

Oscar H. Fogg was educated in the Public Schools of Philadelphia. His first business experience was in a clerical position with The United Gas Improvement Company in Philadelphia; later, as a cadet engineer, he received practical experience in gas manufacture, plant construction and gas distribution at Yonkers, N. Y., and other U. G. I. plants in Westchester County.

From 1901 to 1902 Colonel Fogg was superintendent of the Newtown & Flushing Gas Company at Flushing, Long Island, and the following year he had charge of the construction of the gas works and distribution system at Ocean City, N. J., and of the operation of the plant on its completion.

The year 1904 saw the beginning of his employment by the Consolidated Gas Company of New York, where he remained until 1917, when he entered the military service, as a captain in the Ordnance Department. His first work with the Consolidated Gas Company placed him in charge of the laying of thirty-six inch mains in New York City and later he assumed the position of engineer of the department of mains and services.

In 1910 he was assigned to special work including the investigation of gas-making processes and processes of combustion, the utilization of by-products, the valuation of plant property for court purposes, etc. During this period he made a study of methods for developing the utilization of gas in Europe and in the United States—a study of especial value to the commercial interests of the industry.

In 1912 Colonel Fogg was appointed engineer of utilization, and organized the department of utilization of the Consolidated Gas Company of New York and its allied gas companies, to the development of which he devoted his energies until called upon to enter military service.

OSCAR H. FOGG

He was a director and member of the Executive Committee of the Municipal Lighting Company, and a member of various engineering and professional societies, among them the American Society of Mechanical Engineers, the American Society of Heating and Ventilating Engineers, the Society of Gas Lighting, the Society of Gas Engineering, the National Fire Protection Association, the Illuminating Engineering Society, the International Acetylene Association, the British Commercial Gas Association and the (British) Illuminating Engineering Society.

Colonel Fogg was active in the work of both the American Gas Institute and the National Commercial Gas Association, and was treasurer and a director of the latter when he entered the Army. In 1913, representing the National Commercial Gas Association, he presented a paper describing its activities before a meeting of the British Commercial Gas Association in London.

He has been associated with the Bureau of Standards as a member of its advisory committee in the preparation of the National Gas Safety Code and served in a similar advisory capacity with the Industrial Commission of the New York State Department of Labor.

In September, 1917, Colonel Fogg entered the military service as a captain in the Ordnance Department, and was engaged in the design of plants and facilities for the repair and maintenance of ordnance material in France, and in the recruiting, organizing and training of enlisted and commissioned personnel for this purpose.

In France, he was first engaged with troops on the construction of ordnance base shops, and subsequently appointed chief of the Shop Organization and Maintenance Section and placed in charge of the organization, installation and operation of repair and maintenance establishments. Later, he was made Chief of the Construction and Maintenance Division of the Ordnance Department in France, the division which had supervision over all construction work and the operation of all repair and maintenance activities of the Ordnance Department in the American Expeditionary Forces, including the large base shops and the numerous smaller shops throughout France. Colonel Fogg was honorably discharged from military service on Mar. 31, 1919.

Increase Granted Marshall Company

The application for an increase in the gas rates for Marshall, Mo., applied for by the Missouri Gas & Electric Service Company on Apr. 1, was granted by the Missouri Public Service Commission on Apr. 28. A table of old rates and the increase allowed follows:

Old rate, $1.50 per 1,000 cu. ft.

Discount of 10 per cent if bill was paid on or before the 10th of the month.

New rate, $1.50 per 1,000 cu. ft.

Ten cents per 1,000 cu. ft. penalty if bill is not paid on or before 10th day of succeeding month. No minimum.

Personal Notes

MAJOR WAYNE STACEY has recently returned from France where he was on the staff of the Third Division of Regulars. He was in the battles at Chateau Thierry, St. Mihiel and the Argonne Forest, and later was with that division in the Army of Occupation at Coblenz, Germany. Having been relieved of his duties in the army, he will represent the Stacey Brothers Gas Construction Company, Cincinnati, Ohio, as general sales agent.

W. S. GUITTEAU, sales agent for the Stacey Brothers Gas Construction Company of Cincinnati, Ohio, has accepted the position of general sales manager of the Stacey Manufacturing Company of Cincinnati. He assumed his new duties May 1. Mr. Guitteau is one of the best known men connected with the manufacturing end of the gas industry.

JOHN E. KELLEHER, who left Marlboro, Mass., last fall to accept a position as manager of the Plymouth Gas Company, has been transferred to Norwood to fill a similar position with the Norwood Gas Company. Mr. Kelleher was employed by the Marlboro-Hudson Gas Company as commercial agent for 10 years, previous to his going to Plymouth.

LEWIS COLEMAN has accepted a position with the Penn Gas & Electric Supply Company, at Allentown, Pa., where he will become the general manager of the retail department. He assumed his new duties on May 1.

H. C. Ross was recently appointed local manager of the Pacific Gas & Electric Company by the San Francisco office to take the place of M. L. Neely, recently resigned. Several years ago Mr. Ross was manager of the new business department of the company, coming from the Southern California Gas Company. He also worked in the San Francisco office. Mr. Neely was presented by the employees with a gold watch.

HENRY L. DOHERTY, president of Cities Service Company, has been in Bartlesville, Okla., where he visited the Empire Gas & Fuel Company and made informal addresses to two or three departments, particularly the members of the Gas division and Engineering Research department besides the meeting of heads of departments. His talk to the gas meeting was a brief but wonderfully comprehensive discussion of the gas business from numerous angles, including a discussion of the gas business, artificial compared with natural, in which he touched upon engineering and commercial problems, past, present and prospect, with conviction in the minds of his hearers that the best success of the organization depends upon the degree of efficiency attained and applied by the individual.

H. E. MCDONALD has been appointed superintendent of the gas department of the Southern Public Utilities Company, Greenville, S. C., including manufacture, distribution, and sales. He has entered actively upon the discharge of his new duties.

J. L. MURPHY, formerly identified with the promotion of the Atlanta and Anderson Railway, is winning new laurels as industrial representative of the power and gas companies, and is becoming even more intimately known in all departments of the companies. Mr. Murphy became industrial representative of the Georgia Railway & Power Company (all departments), including the Atlanta Gas Light Company, the Atlanta Northern Railroad Company and all other subsidiary companies.

ROY STUTZMAN, who has just been discharged from the navy, has accepted a position as a fireman for the Saginaw (Mich.) Gas Company, and has already taken up his new work. He was a first-class fireman on one of the American transports and made three trips across the ocean.

L. C. MCKENZIE has succeeded Fred Remington as manager of the Monroe (Mich.) Gas Light & Fuel Company. Mr. Remington has not as yet made plans for the future.

H. E. TURNER, commercial manager of the North Shore Gas Company, Waukegon, Ill., resigned his position May 1 and will locate in Indiana and become identified with the Clow Gasteam Radiator Company.

Peterson Borrows from the Army

(*Continued from page* 428.)

As a last resort he figured out the value to the company of each different kind of work the salesmen were doing. He set a value upon the retaining of an old customer who had made a complaint. He set a value upon the securing of gas-lighting business. He set a value upon the various appliance sales. These values were based upon the revenue that was likely to result to the company. The money involved in the transaction did not enter into the calculations at all. The company was not really interested in appliance sales as appliance sales. The only legitimate interest the gas company had in these sales was the amount of gas that was consumed as the result of these sales. The salesmen in the commercial department should be gas salesmen rather than appliance salesmen. It would be worth a great deal more to the company to have each salesman endeavor to increase the sale of gas rather than to merely sell gas appliances.

It was for these reasons that Peterson confined his full attention in placing values upon the different activities of the salesmen to gas revenue. After a very considerable amount of study he had compiled a very formidable set of figures. It would never do to show these to anyone whose job it would be to figure out the bonuses based upon them. The only one who could understand them was the Old Man. He was an engineer and he liked figures. He also was a good business man. If he had not have been he would not have been able to have steered the course of the Blankville Gas Company all these years in such a way that the dividends were always paid and the company's securities were always a favorite in the local markets.

A SYSTEM TO FIT THE LOCAL CONDITIONS

The Old Man and Peterson went over these figures together. They weighed results and worked out new plans. Finally a system was evolved that would fit the local conditions. It was simple and effective. It was based entirely upon the gas revenue and ignored the selling prices of the appliances altogether.

Construction Notes

New Gas Holder for Terre Haute Will Cost $100,000

Permit to construct a gas holder 125 ft. high and 125 ft. in diameter at First and Swan Streets, Terre Haute, Ind., was granted recently to the Citizens Gas & Fuel Company by the Terre Haute Board of Public Works. The holder as contemplated will have a capacity of 1,000,000 cu. ft., and will give the gas company a total reserve capacity of 1,600,000 cu. ft. in its two tanks at First and Wilson Streets.

The cost of the construction is estimated at $100,000. Ground already has been turned on the site and it is hoped that work will be continued without interruption until the cempletion of the holder, which may require about six months. Material is looked for early in June. The structure is to be of steel and concrete.

J. G. Terhorst, secretary-treasurer of the gas company, said that the two tanks would hold enough gas in reserve to supply the city of Terre Haute with illuminating gas for at least 36 hours under ordinary circumstances. At the time of the flood in 1913 the one tank held a reserve supply of approximately 24 hours, but consumption has increased since that time, and gas was used conservatively after the production was stopped by the high water.

Increased Demand Necessitates Larger Plant

Approximate Cost of Erecting New Plant Will Be $100,000

The Northern Alabama Gas Company, it is understood, will at an early day build a practically new plant to meet the increased demands upon it and to keep pace with the general advancements Florence, Ala., is making. For the past year the manager, L. P. Kleitz, has not been able to meet the demands for expansion as he desired, and the result will be a practically new plant which will cost in the making not less than $100,000. This company supplies the three cities of Florence, Sheffield and Tuscumbia. The company has been compelled to turn down new business the past year in order to serve its old customers. The new plant will be designed to serve not only the present patrons but all the requirements of a population much larger than the present.

Winchester to Be Given Better Service

Will Expend $25,000 on Gas Holder

At the last meeting of the directors of the Citizens Heat, Light & Power Company they agreed to make an effort to give Winchester, Ind., better gas service in the future, if their plan receive the cooperation of the council and citizens.

W. W. Goodrich, superintendent of the gas service of this company, went before the city council for the purpose of explaining the plan by which the consumers on their line could have the best possible service.

Mr. Goodrich says if this meets the approval of all concerned the company will expend $25,000 in erecting a gas holder, which will be located on the former Gutheil lots on Short Street. By the use of a gas holder there will always be an even gas pressure, both day and night, instead of the irregular pressure of past years, doing away with all waste and making the supply more abundant.

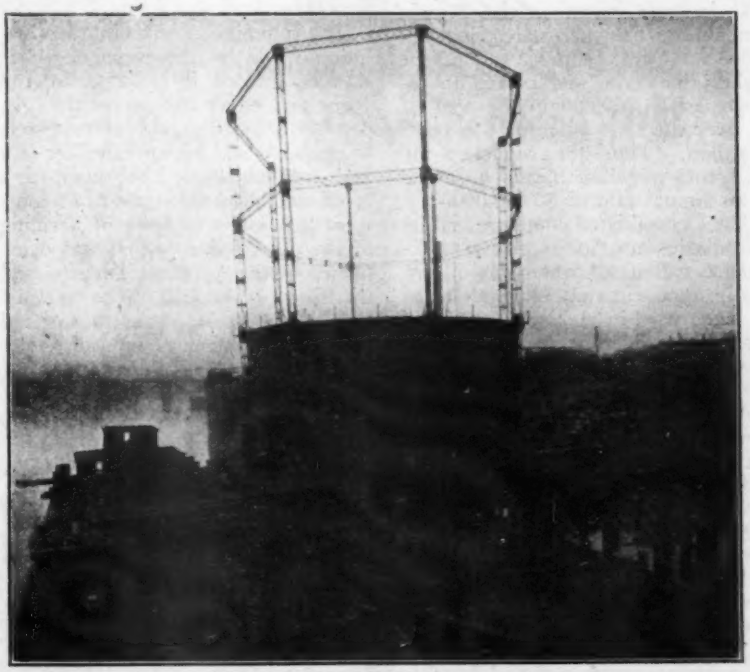
Gas Holder Moved on Two Barges

The gas container pictured was recently moved a distance of 3 miles in Portland, Ore. It is 70 ft. in diameter and 75 ft. high, and weighs 300 tons. It was raised a distance of 15 ft. and loaded on rollers at Front and Everett Streets, then moved two blocks north and two east, being lowered from the street to dock level, a distance of 28 ft. It was then rolled onto two barges lashed together, using hardwood rollers with block and tackle and a large gasoline engine. The barges were then towed three miles to the Northwest Steel Shipbuilding plant, where the tank was unloaded and raised 26 ft., moved across newly filled ground a distance of 2,000 ft. (crossing a railroad track) and placed on its new foundation. The entire work required 71 days.

The tank was moved by Clay S. Morse, Inc., under the supervision of C. J. Disler, engineer of Le Doux & Le Doux, general contractors.

Contemplate Gas Plant for Marshfield

W. E. Vaughn, manager of the Oneida Gas Company of Rhinelander, Wis., was in Marshfield recently and saw Mayor Kalsched and



ROLLING 300-TON GAS HOLDER ONTO BARGES TO BE CARRIED THREE MILES

Aldermen Krasin and Campbell in regard to installing a water-gas plant there. If the city grants a franchise the Oneida company would establish a plant costing about $75,000, intended principally for the manufacture of gas for cooking and heating purposes. Mr. Vaughn estimated that the product could be delivered at the rate of about $1.80 a month and that about nine miles of mains would be required to cover the main sections of the city. The mains would be laid in the alleys, thus eliminating the necessity of tearing up the Central Avenue pavement. Mr. Vaughn appeared to be very favorably impressed with the opportunity here for the proposed enterprise.

Consolidated Gas Gets Lower Oil Price

Consolidated Gas Company has obtained a reduction in the cost of water gas oil of 1½ cents a gallon, bringing the price to approximately 6 cents. The change is retroactive to Apr. 1 and provides for the lowest price for this grade of oil since the 1917 price of 5.035 cents. This is the first break in the war-time prices of important materials used in gas making.

The change is in accordance with the terms of the contract for the 1919 supply which permitted a cancellation in case lower prices became available. The original price for 1919 was 7½ cents a gallon, the highest in years, and meant an increase of $1,360,000 in the cost of oil over the 1918 price of 6½ cents a gallon. Thus the reduction of 1½ cents a gallon means a saving at an annual rate of $2,040,000.

The Consolidated company and its subsidiaries use in excess of 125,000,000 gallons of water gas oil annually, approximately four gallons of oil being used in making 1,000 ft. of gas. The reduction in oil price will lower the gas-making cost, per 1,000 ft., by about 6 cents.

As the other gas companies operating in Greater New York, including the Brooklyn Union Gas Company, had to pay 7½ cents a gallon for oil at the beginning of 1919 it is entirely likely that they also will obtain a lower price.

As yet there has been no indication of a reduction in the cost of coal, which is also used extensively in gas making. Gas companies use a great many grades of coal for different purposes, but so far there has been but a slight reduction in the cost of one of the grades which is used in small quantities.

Public Service Commission Reduces Iroquois Company's Rates

The public service commission directed the Iroquois Natural Gas Company, which supplies Buffalo, Lackawanna, Olean, Salamanca and other municipalities in the western part of the State with its product, to reduce its rate from 37 to 32 cents per 1,000 cu. ft. with a discount of two cents per 1,000 ft. for prompt payment and a rate of 30 cents for schools. The new rates, the commission ordered, shall be effective one year from May 1 and thereafter until they shall be changed by the commission. The Iroquois company is directed to notify the commission within 10 days whether it will obey the order.

The new rates are about the same as those in effect prior to May 1, 1918, when the 37-cent rate became operative. The decision was made in a proceeding started by the commission to investigate rates of the company which it wished to become effective Jan. 1, 1918, the operation of which was postponed until May 1, 1918.

The commission holds that a stipulation made by the company when it was formed in 1912 is in full force and effect and places the burden upon the company affirmatively to establish that higher rates are just and reasonable. The company's tariff which fixed the rate at 37 cents went into effect in spite of a ruling of the commission, which was overturned by the Appellate Division and the Court of Appeals. The commission was without power to suspend the tariff and cannot now order reparation because of failure of the law to give it such power.

The Portland Gas & Coke Company reports earnings for March as follows:

	1919	1918	Increase
Gross	$174,196	$129,137	$45,059
Net after tax	73,784	59,111	14,673
Sur. after chgs.	43,730	29,816	13,914
12 mos. gross	1,940,006	1,439,413	500,593
Net after tax	850,172	646,885	203,287
Sur. after chgs.	497,164	304,991	192,173

Overland Oil and Gas Declares Dividend

Overland Oil & Gas Company has declared the regular quarterly dividend. President Walter A. Frey reported that the company was in a flourishing condition and that with spring weather prevailing drilling had already begun in the Ohio field.

Officers of Overland Oil & Gas Company are all Baltimoreans—Walter A. Frey, president; W. L. Haworth, vice-president; C. J. Bolgiano, treasurer, and H. A. Allers, secretary. Directors include the above officers and J. Monroe Holland, H. D. Bush, F. W. Bolgiano and A. W. Fuss.

The Midway Oil & Gas Company, incorporated, filed for record a charter in the office of the district clerk of Caddo parish, with a capital stock of $100,000. The officers are: W. M. Kelso, president; L. E. DeLoach, vice-president; W. A. Baird, secretary-treasurer, who also constitute the board of directors. The charter states that the authorized capital stock is divided into 100,000 shares of $1 each, and that $50,200 of the capital has been paid in.

The Sasnakra Oil & Gas Company was organized with a capital of $250,000, by Fort Smith and Van Buren, Ark., men. J. H. Butler of Van Buren is president; Charles W. Linthicum, Fort Smith, vice-president; Cly Wood, Van Buren, secretary, and I. H. Nakdimen, Fort Smith, treasurer. Other incorporators are Charles Reybolds, Joe Alexander, R. Scott Robertson, Fort Smith; E. L. Matlock, W. J. Martin, Carl Shibley, Van Buren; J. T. Jarrell, Little Rock, and W. R. Cherry, Paris. The company proposes to sink a series of deep tests in the local gas field for the purpose of determining whether or not the field is productive of oil. Leases on a large acreage have been obtained and negotiations are now in progress to close for another large block of leases.

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